We claim:

1. An integrated biochip system for sample preparation and analysis, comprising at least one chip, wherein said integrated biochip system can perform two or more sequential tasks, wherein at least one of said two or more sequential tasks is a processing task.

2. The integrated biochip system of claim 1, comprising at least one chamber.

3. The integrated biochip system of claim 1, wherein said at least one chip is an active chip.

4. The integrated biochip system of claim 3, wherein one or more sample components can be moved from at least one area of a chip to at least one other area of a chip is by a mechanism other than fluid flow, electrophoresis, or electro-osmosis.

5. The integrated biochip system of claim 4, wherein sample components can be moved from at least one area of a chip to at least one other area of a chip by traveling wave dielectrophoresis or traveling wave magnetophoresis.

6. The integrated biochip system of claim 3, wherein a sample applied to said integrated biochip system can remain continuously within said integrated system from the beginning of the first of said two or more sequential tasks until the end of the last of said two or more sequential tasks performed by said integrated system.

7. The integrated biochip system of claim 6, wherein said integrated biochip system is automated.

8. The integrated biochip system of claim 3, wherein said at least one chip is a multiple force chip.

9. The integrated biochip system of claim 6, comprising two or more chips, wherein said integrated biochip system can perform two or more sequential tasks using at least two of said two or more chips, further wherein at least one of said two or more sequential tasks is a processing task.

10. The integrated biochip system of claim 9, comprising at least one chamber.

11. The integrated biochip system of claim 9, wherein at least two of said two or more chips are active chips.

12. The integrated biochip system of claim 11, wherein at least one of said active chips is a particle switch chip.

13. The integrated biochip system of claim 9, wherein one or more sample components can be moved from at least one area of a chip to at least one other area of a chip is by a mechanism other than fluid flow, electrophoresis, or electro-osmosis.

14. The integrated biochip system of claim 13, wherein sample components can be moved from at least one area of a chip to at least one other area of a chip by traveling wave dielectrophoresis or traveling wave magnetophoresis.

15. The integrated biochip system of claim 9, wherein at least one of said active chips is a multiple force chip.

16. The integrated biochip system of claim 9, wherein said at least two of said two or more chips can be, for at least a part of the time during the operation of the integrated biochip system, in fluid communication with one another.

17. The integrated biochip system of claim 16, wherein one or more sample components can be moved from at least one chip to at least one other chip is by a mechanism other than fluid flow, electrophoresis, or electro-osmosis.

18. The integrated biochip system of claim 17, wherein sample components can be moved from at least one chip to at least one other chip by traveling wave dielectrophoresis or traveling wave magnetophoresis.

19. A method of using an integrated biochip system of claim 5, comprising:

a) applying a sample to an integrated biochip system; and

b) performing two or more sequential tasks in said integrated biochip system, wherein at least one of said two or more sequential tasks is a processing task.

20. The method of claim 19, wherein said sample is a water sample, a blood sample, ascites fluid, pleural fluid, cerebrospinal fluid, or amniotic fluid.

21. The method of claim 19, wherein said at least one processing task is a separation, translocation, concentration, purification, isolation, enrichment, focusing, structural alteration, or disruption.

22. The method of claim 19, wherein at least one processing task is performed using the application of one or more physical forces that are in part generated by micro-scale structures integral to a chip.

23. The method of claim 22, wherein said applied physical forces are acoustic forces, dielectrophoretic forces, magnetic forces, traveling wave dielectrophoretic forces, or traveling wave magnetophoretic forces.

24. The method of claim 22, wherein said at least one processing task comprises the manipulation of moieties by applied physical forces.

25. The method of claim 24, wherein said applied physical forces are dielectrophoretic forces, magnetic forces, traveling wave dielectrophoretic forces, or traveling wave magnetophoretic forces.

26. The method of claim 25, wherein said manipulation of moieties by applied physical forces is by manipulation of binding partners.

27. The method of claim 26, wherein said binding partners are magnetic beads.

28. The method of claim 22, wherein at least one processing task is performed by the application of more than one type of physical force.

29. The method of claim 19, further comprising performing an analysis task.

30. A method of using an integrated biochip system of claim 9, comprising:

a) applying a sample into an integrated biochip system; and

b) performing two or more sequential tasks in said integrated biochip system, wherein at least one of said two or more tasks is a processing task.

31. The method of claim 30, wherein said sample is a water sample, a blood sample, ascites fluid, pleural fluid, cerebrospinal fluid, or amniotic fluid.

32. The method of claim 30, wherein said processing task is a separation, translocation, concentration, purification, isolation, enrichment, focusing, structural alteration, or disruption.

33. The method of claim 32, wherein at least two processing tasks are performed using the application of physical forces that are in part generated by micro-scale structures integral to a chip.

34. The method of claim 32, wherein said applied physical forces are acoustic forces, dielectrophoretic forces, magnetic forces, traveling wave dielectrophoretic forces, or traveling wave magnetophoretic forces.

35. The method of claim 34, wherein said at least one processing task is accomplished through the manipulation of moieties by applied physical forces.

36. The method of claim 35, wherein said applied physical forces are dielectrophoretic forces, magnetic forces, traveling wave dielectrophoretic forces, or traveling wave magnetophoretic forces.

37. The method of claim 36, wherein said manipulation of moieties by applied physical forces is by manipulation of binding partners.

38. The method of claim 37, wherein said binding partners are magnetic beads.

39. The method of claim 33, wherein at least one processing task is performed by the application of more than one type of physical force.

40. The method of claim 30, wherein sample components can be moved from at least one chip to at least one other chip by a mechanism other than fluid flow, electrophoresis, or electro-osmosis.

41. The method of claim 40, wherein sample components can be moved from at least one chip to at least one other chip is by traveling wave dielectrophoresis or traveling wave magnetophoresis.

42. The method of claim 30, further comprising performing an analysis task.